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(54) Title: POLYCRYSTALLINE DIAMOND TOOLS AND METHOD OF MAKING THEREOF

(57) Abstract: The present invention is a tool insert. The tool insert includes a abrasive layer and a substrate. The abrasive layer has a periphery forming a cutting surface and is located on the substrate. The abrasive layer includes at least one of polycrystalline diamond or cubic boron nitride. The abrasive layer tool insert has a sum value of an impact resistance number and an abrasion resistance number that is ≥ 19,000. The impact resistance number is equal to a total number of hits before failure of the tool insert. The abrasion resistance number is equal to equation (1) (1) abrasion resistance = final volume of granite removed by the tool insert (inch3)/final tool wear land area (inch2).





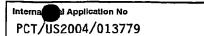
INTERNATIONAL SEARCH REPORT

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A. CLASSII IPC 7	FICATION OF SUBJECT MATTER C09K3/14 E21B10/56 B23B27/0	0			
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